U. S. DEPARTMENT OF AGRICULTURE

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RURAL HOSPITALS

MORE AND MORE President Roosevelt's expressed desire for country people, "a good kind of life on the farm," is being realized. Modern schools, less denominational rivalry with resultant better rural churches, community buildings, little country theaters, country parks and playgrounds, country visiting nurses, cooperative farm business enterprises, improved roads, telephones, the radio, electric equipment, and modern home conveniences are accomplishing notable results. They are bringing to farm people more contentment and to the Nation a more enduring agriculture. And now rural hospitals are being erected, in fulfillment of a long-known need, to give added satisfaction to rural life.

Farm people have long been neglected in health matters. Even the poorest classes in the cities have been better served, with free clinics, dispensaries, and hospital service at their command. Farming is naturally a healthful occupation, but it may not be well known that according to health authorities the rural death rate is practically stationary at present, while the city death rate is decreasing. The country doctor is becoming a thing of the past. The young graduate in medicine with his expensive long-time specialized training prefers the city, where the aids found in a modern hospital are available.

But the farmer does not want charity. This is made manifest by the way in which rural people are taking the initiative in erecting, through public subscriptions or voluntary taxation, county, town, or community hospitals.

To offer technical information on matters of health is not intended. It is also far from our thought to urge the idea that the rural hospital is technically the most important step that can be taken for rural health. The position of the United States Public Health Service that the best result can be achieved by the establishment of efficient local whole-time public health organizations is our own general position. Both the hospital and the public health organization have a place either alone or, preferably, supplementing each other. The Department of Agriculture with its interest in all rural institutions is desirous of assisting to create "A good kind of life on the farm," by encouraging the establishment of rural hospitals.

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RURAL HOSPITALS

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CONTENTS

ORIGIN OF RURAL HOSPITALS

IF HOSPITALS are good for city people, why not for country people? In 1908 this direct question was persistently put by an Iowa country doctor to town and county officials, medical societies, and State legislators. It called attention to the problem of the powers of county government and the problem of equality of opportunity for country people. Already results that practically open a new era are discernible.

At that time hospitals for city people were taken for granted. Incidentally, country people might enjoy their benefits if they lived near enough to a city and their condition permitted transportation to the city hospital over jolting country roads or by railways. At that time (census of 1910) there were nearly 50 million people living in rural territory, of whom more than 8 million lived in incorporated places of less than 2,500 population, and more than 41 million lived in other rural territory, mostly in farming communities. According to the next census, that of 1920, more than 50 million lived in rural territory.

The Iowa country doctor persisted with his question. At that time in the small towns and rural districts of Iowa, where 80 per cent of the State population lived, there was only one hospital bed for every 3,000 people. At the present time the ratio in the United States is one hospital bed for acute diseases to about 250 persons, whereas the recommended ratio is one bed for every 150 persons. In 32 agricultural counties in Iowa there was not one hospital bed at that time. Sixty per cent of the counties of the United States were without hospitals. County-tax, or public, community, township, or district hospitals were unknown.

LEGISLATION FOR COUNTY HOSPITALS

Persistent pressing of this question caused the Legislature of Iowa, in 1909, to pass a law providing that the people of counties might tax themselves to erect county public general hospitals. This was the first of such legislation in the United States. Since that time 16 other States have passed similar laws, and many such hospitals have been built; most States have passed similar acts of partial effect, resulting in the construction of many more hospitals; rural community hospitals have become common; and rural township and district hospitals have appeared, authorized by State legislation. Philanthropists also are increasingly recognizing the rural-hospital field as an outlet for their public beneficiencies and, facilitated by existing legislation, are erecting rural hospitals. (see fig. 1.).

FIG. 1.—Ashton Memorial Hospital, Pipestone, Minn. A native son fulfills his deceased father's aspiration by donating $50,000 to make possible the erection of this hospital in a town of 3,325 population. Money made in local farm and villages enterprises returns to benefit local farmers and villagers

Doubtless many more States would have adopted a county hospital law and more such hospitals would have been built but for the interruption caused by the World War, the great increase in building and equipment costs in the last few years, the recent attention centered on the disproportionate share of rural taxation paid by farmers, and the movement for economy in government. In this worthy movement for economy care needs be taken lest the sense of values become confused. Important questions present themselves.

HOSPITALS AND ECONOMY

It is really economical to dispense with hospitals, to save at the expense of health? Are there not enough visible leaks in government that should be stopped without restrictions on those institutions that make for physical well-being and national efficiency? As bearing on the question of economy the following may be considered:

The economic loss in this country annually from preventable diseases and death is $3,000,000,000, and $1,800,000,000 of this loss is among the gainfully

employed. Forty-two millions gainfully employed lose 350,000,000 days from illness, disabilities, and nonindustrial accidents annually; 28,000 die from industrial accidents. Five hundred thousand working people die annually. At least one-half of this loss is preventable or postponable by proper medical supervision, periodic health examinations, and community hygiene. (The Modern Hospital, Oct., 1924, p. 345.)

Not more than 12 per cent of the rural population enjoys the privilege of anything approaching modern health supervision. The life, efficiency, and productive capacity of the remaining 88 per cent, living on farms and in small towns, is being impaired because of a lack of medical care. (W. S. Leathers, M. D., dean of the University of Mississippi School of Medicine. Jour. Amer. Med. Assoc., Aug. 2, 1924, p. 315.)

What is the relation of the hospital to this question? We have progressed a long way in this country since the almshouse in New York City, a final resting place for sick paupers, was transformed into our first public hospital. The conception of a hospital as solely a place to remedy the accidents and alleviate the sufferings of its

FIG. 2.—Training class for nurses at Greater Community Hospital, Creston, Iowa

patients is gradually passing. Modern hospitals, including those being established in rural sections, are assuming much wider community functions and responsibilities. There are four such functions:

(1) *Medical.*—To care for the sick and injured.

(2) *Educational.*—To train physicians, nurses, and social workers.

(3) *Social.*—To educate the community in public health and personal hygiene.

(4) *Research.*—Through investigation and experience, to throw light on public health and hygiene.

In other words, modern public hospitals are great preventive institutions, teaching doctors and nurses and through them the public, how to prevent disease. Patients learn the rules of disease-prevention in hospitals, clinics, and dispensaries and spread the knowledge to the public. Such community institutions, not only negatively in saving life and preventing disease, but positively in promoting health, are great economic institutions. (See fig. 2.)

DIMINISHING SUPPLY OF COUNTRY DOCTORS

To have rural hospitals there must be rural doctors, and the scarcity of doctors in rural communities is becoming a menace. A nation-wide survey made by the committee on medical service of the conference of State and provincial health authorities of North America resulted in the following conclusion:

There is a universal tendency for physicians to abandon the rural districts in favor of the cities. Those who remain in the country belong mostly to the older generation. Recent graduates in medicine seldom seek practice outside of large towns or cities. In hundreds of rural districts medical care is inadequate or absolutely lacking. Replies from health officers in 30 States indicate that the condition of affairs differs only in degree, varying from serious to desperate. (The Country Gentleman, Nov. 22, 1924, p. 17.)

According to Hugh S. Cuming, Surgeon General, United States Public Health Service:

There is a shortage of doctors in farming districts. The shortage is becoming more acute. It exists to some extent in every State. On this point conclusive evidence has been collected by such medical authorities as Doctors Matthias Nicoll, jr., of Albany; N. P. Colwell, of Chicago; W. L. Tyler, of Curdsville, Ky.; E. P. Lyon, of the University of Minnesota; James A. Hayne, of South Carolina; S. J. Crumbine, of Kansas, and more lately of New York; C. B. Crittenden, of Tennessee; E. G. Williams, of Virginia; W. S. Rankin, of North Carolina; and also by Doctors W. F. Draper, L. L. Lumsden, and other members of the staff of the United States Public Health Service, the Children's Bureau investigators, and others.

A few details brought to light by these men will help us understand some of the contrasts between urban and rural medical service.

In a Montana county, 5,500 square miles in area, there are only three doctors and no hospital. Two-thirds of the mothers meet the experience of childbirth without medical care. * * *

Forty Kentucky counties are without adequate medical service, at least one county being without a single physician. And most doctors in rural counties of Kentucky are at or past middle age. * * *

In Minnesota 127 small villages reported the lack of a doctor; and only 95 per cent of towns of between 400 and 1,000 population had physicians. Conditions are about the same in the Dakotas, several counties being entirely without doctors. * * *

Taking the country as a whole, 63 per cent of the physicians are located in cities and towns of 5,000 or more population. But these 1,467 places include a little less than half our total population. Thus the 14,225 incorporated places of less than 5,000 inhabitants, together with all the rural territory and including more than half of our population, have only 37 per cent of the doctors. (The Country Gentleman, Nov. 22, 1924, p. 17.)

MEDICAL EDUCATION AND THE SUPPLY OF COUNTRY DOCTORS

A critical factor in the situation is that recent graduates in medicine do not seem to locate in rural communities. Modern medical education with its emphasis on diagnosis, X-ray apparatus, radium, microscopes, laboratories, and clinics, is developing graduates who depend on these things in their practice and who locate to practice where such aids are available. As these aids are mostly available in cities, the majority of doctors are naturally found there and the minority are found in the country.

Widely distributed figures indicate that the trend of young physicians to the cities is easily 25 to 50 times as great as that of the population in general. (Jour. Amer. Med. Assoc., Jan. 31, 1925, p. 369.)

Sixty per cent of the population is getting only 25 per cent of the doctors, and this 25 per cent is taken chiefly by the many large towns. (Jour. Amer. Med. Assoc., Jan. 24, 1925, p. 283.)

William Allen Pusey, president, 1924–25, of the American Medical Association, writes concerning medical education and medical service:

Of her [Johns Hopkins University] 1,592 graduates in 24 years, 2.45 per cent are in towns of 5,200 or less.

Dr. Gordon Wilson, of Baltimore, made in 1914 a study of the distribution in Maryland of Johns Hopkins graduates as compared with other graduates of Baltimore schools, which is even more instructive. Doctor Wilson writes: "In the 16 years from 1897 to 1913, inclusive, the Johns Hopkins Medical School graduated 965 men, of whom only 4 are practicing medicine in rural Maryland. During exactly the same period the University of Maryland School of Medicine graduated 1,225, of whom 140 are practicing medicine in Maryland outside of the cities" (that is approximately, 0.4 per cent of Johns Hopkins graduates are practicing in rural Maryland and 11 per cent of those of the University of Maryland.—W. A. P.)

He further writes:

I have also analyzed the distribution of the graduates of the University of Illinois College of Medicine, formerly the College of Physicians and Surgeons of Chicago. * * * Its entrance requirements were a high school education until 1913. The total number of its graduates from 1890 to 1916 (when the last class entering on a high school requirement graduated) was 4,334. The number of those who settled in towns of 5,000 or less is 922—21.28 per cent against 2.45 per cent for Johns Hopkins graduates during approximately the same time. * * * As Secretary McCormack of the Kentucky State Board of Health has said in a letter of June, 1920: "At present there are no students from the country districts. In a recent examination to practice there were 42 applicants: 40 of these were from Louisville or from cities outside the States." (Adapted from an article in the Journal of the Amer. Med. Assoc. Feb. 7, 1925, p. 437-441.)

Many reasons are given for the fact that recent medical graduates locate in cities in preference to country towns. High authorities ascribe the fact to the long technical, specialized, expensive medical education now provided, to overstandardization in medical curricula. In the same article, Doctor Pusey writes:

The chief reason for our new difficulties is that medical education has made the license to practice medicine so expensive that those who are now paying the high price for this license exact a correspondingly high price for their services under it * * * We are educating men to be specialists or who are able to choose to do their practice chiefly in hospitals.

One very important fact in the bearing of this principle on the rural shortage of physicians is the way it is debarring from medicine young men from small towns and rural districts * * *.

In reference to the above figures relating to Johns Hopkins, Doctor Pusey writes in the same article:

I believe that these figures justify my belief that the graduates of a school like Johns Hopkins will only exceptionally settle in the country, and that if we want physicians who will practice in the country, we must make the premedical requirements less exacting in time.

In another article in the Journal of the American Medical Association, March 21, 1925, pages 898–903, other specialists are quoted:

The modern education of the physician lays undue stress on the laboratory in diagnosis, and neglects the study of the symtomatology of the onset and the course of a disease. (Samuel W. Lambert, New York.)

If a medical school has any real function, it is to turn out medical men who will take care of the women and children of this country, and we are not teaching medicine to-day that is making them fit for such work. (John A. Witherspoon, Nashville, Tenn.)

In the article published in the Journal of February 7, 1925, page 440, we find:

> The committee on medical service of the conference of State and provincial health authorities, in its report of 1923, says: "The demand for its rapid solution is imperative."
>
> The reference committee on medical education says: "The real problems of how to get the benefit of trained men for the rural districts has not been solved."

Frank Billings, Chicago, in the Journal of the American Medical Association, April 9, 1921, page 1013, and Hugh S. Cumming, in The Country Gentleman, November 22, 1924, pages 17 and 38, strongly support the same theory.

Thus eminent medical men and organizations are proposing a revision in medical courses in order that doctors may be trained who will go into rural communities to practice. Meanwhile millions of dollars are being spent annually in our medical colleges in giving specialized training to doctors who locate for practice mostly in the large cities. Many are wondering how long State legislatures, controlled largely by representatives from rural communities, will continue to vote large sums of money to State medical institutions whose graduates seem to be so trained that they go largely to the cities to practice after graduation. It is probable that those who determine college medical curricula will themselves solve the problem. Some solution would not seem impossible when it is recalled that those in charge of theological and educational curricula are solving somewhat similar problems bearing on rural preachers and teachers.

RURAL HOSPITALS RELIEVE COUNTRY-DOCTOR SHORTAGE

The modern hospital is appearing in rural communities to help to solve the rural doctor question (fig. 3). Eminent specialists agree that one solution of the problem is the erection of rural hospitals. Victor C. Vaughn, Ann Arbor, Mich., treats of the problem of the scarcity of rural doctors in an article in the Journal of the American Medical Association, April 9, 1921, pages 983–986. After stressing the need of a hospital as an adjunct in practice for the doctor of modern training, he writes:

> Every community, the boundaries of which may or may not be determined by State, county, municipal, or township lines, should have the authority, on a majority vote of its citizens, to build, equip, and maintain a community hospital.

After giving detailed recommendations as to form of State law, local organization, and management, he continues:

> In my opinion, preventive and curative medicine should be combined in the community hospital. Increasing the number of health officers or securing for each county a health officer, as is now being attempted by more than one State, will not serve the purpose I have in mind. As we have already seen, the death rates in rural districts have not been materially lessened in the last 20 years, while they have been reduced in the large cities. This difference is not wholly, nor do I believe even largely, due to the better or more complete prevention of the communicable diseases, but is largely due to better facilities for diagnosis and treatment possessed by the profession at large.

In the Journal of the American Medical Association, March 28, 1925, page 986, is the following:

The lack of hospitals has undoubtedly been a prominent factor in the abandonment of smaller rural communities by physicians, since well-to-do country people have been forced to go to larger towns and cities for hospital care. An increase in the number of modern hospitals, therefore, even though small, will help to bring a wider distribution of physicians.

A further opinion by another authority:

I think the time has arrived, and it should be emphasized by the organized profession of this country, when we should look forward to developing broadly trained men as general practitioners, and in addition to develop 10 or possibly 15 per cent of men who can later take up special practice. We can not be satisfied with simply training men; we must also provide medical plants in which these men can practice medicine. We must develop well-equipped hospitals. (Arthur Dean Bevan, Illinois. Jour. Amer. Med. Asso., June 18, 1921, p. 1765.)

FIG. 3.—The only way the progressive community of Sandy Springs, Md., could retain their one remaining country doctor was to build this hospital for him at Olney. The doctor is superintendent of the hospital

FURTHER NEED FOR HOSPITALS IN RURAL COMMUNITIES

A survey was made at Fort Collins, Colo., to determine why 900 farmers moved to the city. In the 732 replies, the lack of certain conveniences were given as follows: Home conveniences, 20; church, 16; social, 42; education, 182; age of parents, 22; economic, 214; and health, 236. (Farmer's Wife, October, 1924.)

There are 7,000,000 children under 10 years of age on farms as compared with 5,700,000 in cities having an equivalent total population. Thus farm parents bear the anxiety and expense of looking after the health of children many of whom go to live in the city as soon as grown.

Of 2,850 rural counties in the United States, only 231 had a full-time health officer at the beginning of 1924. According to L. L. Bernard of the University of Minnesota, the country is behind the city in the matter of information regarding sanitary conditions, in the application of the methods of sanitation, and in the supply of such sanitary and health aids as hospitals. Most cities have mandatory school medical inspection, but only 11 States have such legislation that applies to rural schools. Thomas D. Wood, of the joint committee of the National Education Association and the American Medical Association, is authority for the statement that country school children are handicapped by more physical defects than are the children of the cities. A writer in The Journal of the American Medical Association, January 31, 1925, page 366, says:

> Adams points out, "For the first time in the history of American vital statistics the country * * * showed in 1921 a higher death rate for babies under 1 year than the city."

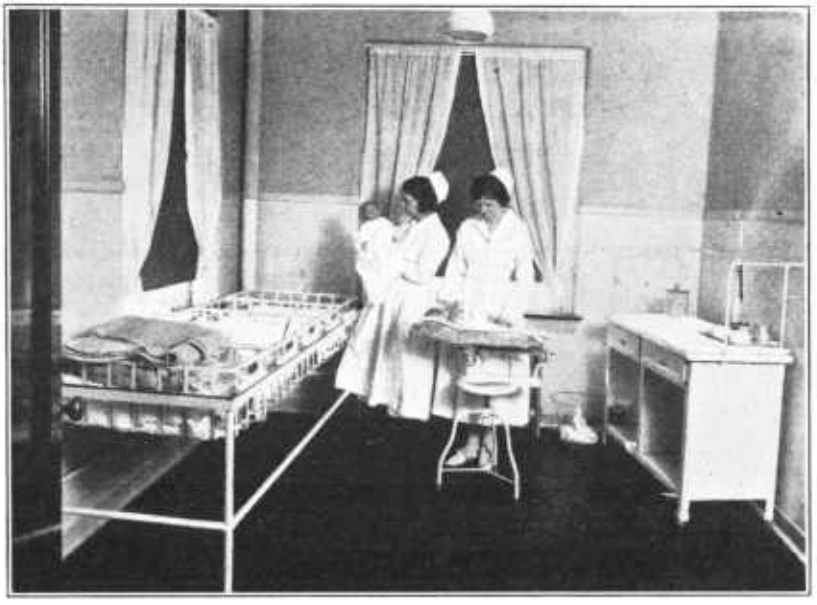

FIG. 4.—A comfortable place for babies. Nursery, County Hospital, Frankfort, Ind.

In the special field of child bearing alone the rural hospital would more than justify itself. "Rural women * * * are bearing three out of five of our coming American citizens," writes Frances Sage Bradley in Hygeia, September, 1924, page 545. Maternity mortality from childbirth figures place the United States seventeenth in the list of civilized countries of the world, according to a writer in the same journal, and the rate of mortality seems to be increasing. (Fig. 4.)

According to W. S. Rankin, State health officer of North Carolina, every year 750,000 women (representing approximately one-third of 2,500,000 births occurring annually in the United States) pass through childbirth without medical attention. Add to this the

enormous unsupplied need of medical supervision of pregnancy; add the puerperal state, inadequately attended, and there is a total uncared-for field of maternity from two to five times that which is cared for. According to Doctor Rankin, the health officer sees, as a result of neglect of motherhood, a large percentage of the 1,500,000 annual children's cases of diarrhea and enteritis; early childhood with 700,000 cases annually of the common communicable diseases; the great problem of malnutrition, involving from 2,000,000 to 4,000,000 public-school children; the common defects of childhood, involving 1,000,000 public-school children who suffer from diseased tonsils and adenoids, 4,000,000 who have visual defects, and 15,0000,00 who need dental treatment, all of them retarded, and tending to retard the school systems of this country.

It is readily admitted that, ordinarily, in normal cases [of childbirth], the home is perhaps as safe a place as the hospital. But what of the help and accommodations at home as compared with the conveniences of a hospital? What of the expense? What of the physician who burdens himself with the responsibility of the work and worry that the management of a labor case at home demands? * * *

In my opinion, the hospital is the best and safest place for women to pass through the ordeal of labor. (E. Gustav Zinke, M. D., F. A. C. S., Cincinnati, Ohio. Adapted from an article in The Jour. of the Mich. State Med. Soc., Apr., 1916, pp. 163–169.)

As to the need of rural hospitals, Woods Hutchinson says:

As the situation stands at present, the communities which are the most in need of skilled, up-to-date hospitals within easy reach of all, are not our great cities, but our small towns and our country districts. * * * It is not too much to say that, for surgical emergencies, diseases, and accidents alone, there should be a free and accessible hospital for at least every 3,000 to 4,000 of our population, and that no community can call itself properly prepared to deal with disease—call itself medically civilized, in fact—which has not a hospital within easy access of at least 75 per cent of its homes. * * * The community that has these hospitals will prosper; the community that pays no heed to the welfare of the individual has a load about its neck—a load that appears in almshouses, orphan asylums, and jails. The hospital would cost but little more than the jail, and it would be practically self-supporting—and a jail never is. The movement for community hospitals has begun; why not organize a committee and start yours now? It will pay. (Adapted from an article in Good Housekeeping Magazine, June, 1915, pp. 685–690.)

ADVANTAGES OF RURAL HOSPITALS

The benefits that accrue to a rural community in having its own hospital rather than using a distant city hospital are several.

(1) *Difficulty of transportation is overcome.*—Transportation delays are serious, especially in emergency cases. Transportation facilities in remote rural districts, if not entirely lacking, are often of the most elementary kind. On the other hand, some rural hospitals provide ambulance facilities similar to city hospitals.

(2) *Expense is saved.*—City hospitals are generally much more expensive than rural hospitals on account of costly and intricate equipment not entirely necessary, and expensive buildings and grounds. Transportation adds to the expense—an important item for country people.

(3) *Personal attention is assured.*—Patients and members of the hospital staff have the usual neighborhood relationships. The patient is more likely to be treated as an individual.

(4) *Follow-up work is made possible.*—Often a patient needs to be kept under general observation by the hospital while convalescing after leaving the hospital.

(5) Educational and preventive values are derived.

WHAT A COMMUNITY NEEDS TO KNOW BEFORE INSTITUTING A HOSPITAL

A hospital should be an integral part of the community. It should have the friendly support of all. Some superstitions in regard to hospitals still exist. Public sentiment should be carefully educated in favor of the hospital. Before deciding to build a hospital a survey should be made involving the following factors:

FIG. 5.—Sympathetic personal interest tends to alleviate suffering. Sun parlor, Fulton, Mo., County Hospital

(1) *Need for hospital.*—Is it better to build a new hospital or to improve an already existing hospital? Duplication should be avoided when possible. One good hospital is better than two mediocre competing ones.

(2) *Support of public sentiment.*—Care should be taken that all elements in the community recognize the value of a hospital. Education may be necessary.

(3) *Size of community.*—A hospital of the better kind needs to have the support of about 10,000 people. Prospects of future growth should be considered.

(4) *Size of building.*—The building should be large enough so that all natural hospital functions may be conducted efficiently.

Bed capacity is involved, a general rule being one bed for each 150 of population, town and country.

(5) *Financial resources.*—The financial resources should be sufficient not only to finance the construction of the hospital but to assure its maintenance.

(6) *Hospital policy.*—A somewhat definite future hospital policy should be established from the beginning. There should be knowledge of what needs to be done and continuity of program if possible. A haphazard, changing policy is to be avoided.

SOME ELEMENTS OF A BUILDING PROGRAM

After it is decided to build a hospital there are many questions to be solved.

FIG. 6.—Placing farm patient in hospital ambulance to convey to the county hospital, Fairfield, Iowa

(1) *Location.*—The hospital should be near the center of the supporting population, preferably in a town, and where transportation facilities are available.

(2) *Site.*—A quiet place with restful surroundings is desirable. Local transportation facilities for prospective patients and doctors should be considered. Grounds sufficient in size for a lawn, plantings, and a vegetable garden are desirable.

(3) *Plan.*—The services of a competent architect acquainted with hospital construction are advisable.

(4) *Character of building.*—The hospital should be of durable materials and preferably of fireproof construction, not over two stories and basement in height. In the distribution of private rooms, wards, dining room, office, laundry, elevator, and other services the convenience of doctors, staff nurses, patients, and visitors should be considered.

(5) *Nursing service.*—Such questions should be considered as whether graduate nurses are to be employed or a hospital-training school to be established and where the nurses are to be housed.

(6) *Special services.*—The probability of developing a laboratory, a department of radiology, public clinics, and out-patient department, a consulting medical staff, and ambulance service, should be considered. (Figs. 6 and 7.)

HOW TO EXTEND USE OF HOSPITAL

After the hospital is in operation every effort should be made to make its availability and usefulness known, especially to less educated elements of the community. Local superstitions should

FIG. 7.—Carrying farm patient from hospital ambulance to hospital, Fairfield, Iowa

be cleared up. Service to patients is the first duty of a hospital, but it can ill afford to neglect any opportunity to make its work known to the general public. In this way public interest may be sustained.

Usefulness of the hospital may be made known by:

(1) *Thorough service.*—A satisfied discharged patient is the best advertisement for a hospital.

(2) *The spoken word.*—The service of the hospital should be mentioned to patients, visitors, and the general public.

(3) *Visitation.*—Courtesy and attention to visiting patients is an important factor.

(4) *Annual report.*—A yearly report should make available in simple readable form the service the hospital is rendering, its financial condition, etc.

(5) *Leaflets.*—Special leaflets may be prepared for general distribution.

(6) *Letters.*—In public or private communications a good word may be spoken for the hospital.

(7) *Hospital day.*—Some hospitals celebrate hospital day once a year. Preliminary interest is stimulated to encourage all to come. The hospital is shown to the people and all are made welcome.

(8) *Newspapers.*—Friends of the hospital should use the newspaper columns to stimulate interest. Editors of local newspapers will usually prepare publicity articles from material and illustrations furnished by the hospital.

(9) *Radio broadcasting.*—Radio information may be broadcasted by local radio.

(10) *Inside interest.*—A smooth-working, contented, interested staff, proud of the success of the hospital can not conceal from the public their satisfaction in the work performed.

TYPES OF HOSPITALS AND SPECIFIC EXAMPLES

Various types of rural hospitals are found. Certain hospitals illustrating particular types were selected and are given special treatment in this bulletin. These particular types of hospitals were selected because each seemed to be applicable to important varying conditions found in different sections of the country or in different political units. They have proved admirably adapted to the special conditions confronted. It is hoped that any rural community contemplating the erection of a hospital may find among these types one well suited to its purposes and that the detailed information regarding each special hospital described will prove helpful in the actual construction and operation of the hospital.

The different types selected are: (1) County hospitals—separate county hospitals and county hospitals connected with the county home, (2) township hospitals, (3) town hospitals, (4) district hospitals, (5) community hospitals, (6) community-private hospitals, and (7) southern mountain hospitals.

COUNTY HOSPITALS

In a paper prepared and used in pushing his project for a county hospital law, the Iowa country doctor pointed out, among other things, that public county hospitals in rural territory, convenient of access to the people, would save lives, increase the efficiency of rural doctors, prevent malpractice, train nurses, and stimulate community hygiene. He called attention to the 12,800 mothers who die annually in the United States during childbirth, and asserted that a large proportion of them could be saved by proper care and attention. Pointing out that 30,276 babies die each year from premature birth and 10,052 from lack of care, he bluntly asked whether these figures stood for race suicide, race murder, or merely carelessness.

To remedy these conditions and others directly pertaining to rural people, he advocated that a public-hospital system fashioned somewhat after the public-school system be developed, such hospitals to be supported and maintained by the county. There were many city hospitals in existence at that time, but no tax-built county

general hospital, where farming people felt free to go through sense of ownership.

At that time Iowa counties, like those in most States, had no legal authority to build or maintain hospitals through taxation. A bill was introduced in the State legislature providing that county supervisors might, after vote of the people, issue bonds and levy a tax not to exceed 2 mills on the dollar, for building such hospitals, "with equal rights to all and special privileges to none." After many vicissitudes the bill became a law September 6, 1909, "the first specific legislation providing for rural public hospitals enacted in the United States." The many county tax-built public hospitals since established are testimony to their need and usefulness.

WASHINGTON COUNTY HOSPITAL, WASHINGTON, IOWA

Washington was the first county in Iowa to take advantage of the new State hospital law, the first passed in any State.

This county has a population of 20,421 and an area of 559 square miles. The county seat, Washington, has a population of 4,697. The chief industries of the county are farming and stock feeding. The county legislative body is the board of supervisors, the majority of whom are farmers, as are the other county officials. Immediately upon the passage of the law, doctors, business men, and county officials took the necessary initial steps. The law states specifically that practicing physicians may not be on the hospital governing board, but every doctor in the county supported the proposition.

A definite plan of campaign to present the proposition to the voters was adopted and adhered to. The movement was fathered by a county-wide organization, but the campaign was actually conducted by small committee with large powers. After the preliminary legal requirements and publicity were completed, the matter was allowed to rest for a time. Then an intensive campaign was started 10 days before election consisting of (1) publicity work by all newspapers; (2) distributing circulars, sample ballots, and petitions through schools and stores, and dissemination of accurate information, especially cost estimates; (3) public appeals through the churches and motion-picture houses; and (4) passing out of sample ballots at every polling place by relays of workers.

Forcible arguments were put forth in favor of a hospital. A signed public statement was issued by the county auditor that about one-fourth of the cost of erecting the hospital would fall on railroads, other corporations, and nonresident land owners, and that the average resident taxpayer would pay only about 79 cents a year for four years. It was claimed that a modern hospital would be worth more than it costs in maternity cases alone and that epidemics could be controlled much better. The hospital would make available to rich and poor alike the most advanced methods of the treatment of disease, together with the most modern equipment. Every physician in the county would have equal rights and privileges in the hospital, and every patient could have his own family doctor. It was pointed out that, without the hospital, more money would go away from the county to distant hospitals for surgical cases during the proposed four years of financing the hospital than the hospital itself would cost. Every physician in the county signed a statement

as to the invaluable aid a well-equipped hospital would be to doctors in the treatment of disease and to the alleviation of human suffering.

The result of the vote on November 8, 1910, was that 18 of the 23 county precincts supported the proposition. On July 15, 1912, the hospital (fig. 8) was dedicated in the presence of over 3,000 interested people, and on the second day following the first patient was received.

The building is a three-story and basement fireproof structure, 80 by 40 feet, built of reinforced concrete, brick, and stone. In addition to the necessary service and operating rooms, it has 19 private rooms and two 5-bed wards, with a possible expansion to 35 beds. The building was planned with thought of utmost utility of space allotted. The floors throughout are of terrazzo, with rounded corners and edges, which make them easy to keep clean. Every room has direct sunlight at some time during the day, telephone and

FIG. 8.—Washington County Hospital, Washington, Iowa. A fully equipped rural hospital

electric-fan connections, indirect lighting system, electric light call system, and extra-large doors and windows. The operating rooms have abundant light. They are finished in white enamel, have the latest type of electric lights, and are furnished with the most approved sterilizing and operating equipment. There is an electric elevator. The institution has full modern hospital equipment, including two portable X-ray machines, sun lamp, high-frequency machine, and sterilizer. The laboratory is one of five branches of the State laboratory. Here quick action on cultures is obtained, which often means that the nature of a disease may be determined three days sooner than would be possible if the culture were sent to the State laboratory.

The hospital is in an attractive location and is particularly fortunate in extensive grounds of 11 acres. For the patient there are pleasant surroundings and a restful outlook. Six acres are given

over to fruit and vegetable gardens, and one-half acre to a chicken yard. The products help to support the institution.

The hospital is managed and controlled by a board of seven trustees elected by the people of the county. The terms of these trustees expire in different years, and they serve without salary. Three must be from territory outside of the town in which the hospital is located, three may be women, but none may be physicians. The trustees elect a superintendent of the hospital, generally a woman, and the superintendent selects the nurses and other employees. The hospital staff consists of a superintendent, an assistant superintendent, and a night supervisor, all of whom are graduate nurses and 12 pupil nurses.

A training school for nurses was established in connection with the hospital, offering a three-year course in nursing. The school is affiliated with the hospital of the State university, and the final six months' term of the three years' training is received there. While physicians are not allowed on the governing board of the hospital, their valuable advice and assistance in management are made available through establishment of an advisory medical staff.

There is an active and aggressive woman's auxiliary, a body of 200 women. In helping to equip the hospital, in furnishing linen and supplies, canning fruit, educating the public to the value of the hospital, campaigning for public health, their aid has been invaluable.

Funds for the acquisition of the property were obtained as follows:

Site of 11 acres donated, value		$3,700.00
Building proper by (1 mill tax for 4 years)	$25,336.50	
Heating	2,147.00	
Lighting	1,185.00	
Plumbing	2,249.00	
Painting	593.00	
Vacuum cleaner	400.55	
Total		31,911.05
Furnishings (all donated) estimated		5,450.00
Total cost		41,061.05

Societies, lodges, churches, and private individuals were particularly energetic in raising funds for furnishing certain individual rooms.

The hospital is maintained by means of hospital fees and receipts from county taxation. The rate of taxation for the hospital from 1920 to 1923, inclusive, ranged from 1 to 1.52 mills per $100.

The following is a statistical report of the hospital for a typical period of four years, August 1, 1916, to August 1, 1920:

	Admissions	Surgical	Medical	Births	X ray	Deaths	Receipts	Running expense
Aug. 1, 1916, to Aug. 1, 1917	378	246	74	29	-------	13	$9,473.81	$14,450.37
Aug. 1, 1917, to Aug. 1, 1918	540	346	21	59	23	21	14,011.35	19,680.07
Aug. 1, 1918, to Aug. 1, 1919	530	289	92	50	47	24	13,050.64	21,162.32
Aug. 1, 1919, to Aug. 1, 1920	628	340	83	60	72	21	16,293.40	24,796.38

The following is a detailed report of hospital expenditures for the year 1922:

Report of Washington County Hospital[2] *for the year 1922—Expenditures*

Groceries	$2,487.06
Meat	704.69
Milk	725.02
Ice	429.42
Drugs, alcohol, alcohol tax	673.44
Laundry	2,750.04
Power, gas, merchandise, installation, rent	1,294.95
Hospital supplies	1,495.69
General supplies	69.23
Water	117.91
Hospital furniture	260.47
Rent, nurses, maids	643.00
Fuel, hauling	1,267.99
Plumbing and supplies	182.96
Office supplies and repair typewriter	22.31
Elevator repair	10.72
Hospital equipment	106.11
Cleaning materials	139.00
Telephone, rent, tolls, upkeep, installation, listing	177.90
Membership dues, American Hospital Association	5.00
Mutual telephone, rent, upkeep	13.20
Modern Hospital subscription	3.00
American Journal of Roentgenology	6.00
Express, drayage, freight, printing, postage, and taxi	145.29
X ray, supplies, equipment, repair, Maxwell (services), in installation	653.23
Salaries and wages	7,725.95
Grounds and gardens	533.34
Building and permanent improvements and hardware	446.16
Insurance	6.40
Training school, allowance, books, graduation, charts, uniforms, bonus, sundries	1,284.44
Nurses, residence, interest on loan, insurance, laundry, fuel, telephone, gas, light, furniture, firing, water, care, building, piano tuning	1,786.83
Total expenditures	26,166.75
Operating receipts	19,312.00

The following is the consolidated tax levy of the county, including the hospital, for 1923:

Consolidated tax levy for 1923

	Mills		Mills
General State revenue	10.19	County school	1.00
Soldiers' bonus	1.31	Funding bond	2.02
County	6.00	Soldiers' relief	.33
County insane	.52	County poor	3.00
Court expense	1.32	State insane	.79
Bridge	5.00	County hospital	1.52
County road	1.00		
County road building	2.00		36.00

[2] The Washington County Hospital is selected from the various rural county hospitals studied because it is the oldest in the country. It is a good example of a complete, well-equipped, modern hospital built and maintained by a well-to-do rural county. Some other county hospitals may have been run more economically. Expensive supplies and apparatus were purchased, useful in themselves but not absolutely necessary in a small hospital. The hospital cares for a number of county indigent cases which the county would have to care for if the hospital were not in existence. The hospital fees are much less than in city hospitals, while equipment and service are practically as good. The people of Washington County expressed great satisfaction with their hospital. A county treasurer stated that the hospital tax is the only tax the people pay without complaint. For the benefit of counties that contemplate the establishment of general hospitals it may be said, however, that some county hospitals, with essential equipment and service, seem to have a more equal relationship between actual hospital receipts and expenditures, thereby depending less upon taxation for support.

The amount of county taxes levied in 1923 for all purposes was $978,076. Hospital rates for general care and nursing are $3 per day for ward beds and $4 to $7 per day for private rooms. Use of operating rooms is $7.50. A special rate for two weeks is now made in confinement cases in order to encourage the use of the hospital for this purpose.

A separate building is rented as a home for the nurses. Pupil nurses receive their board, lodging, and laundry and are allowed $5 per month the first year, $7 per month the second year, and $10 per month the third year. The hospital is run on the budget system, the trustees each year certifying the future financial needs to the county supervisors, who, in turn, fix the rate of taxation for the coming year.

Value to patients.—Up to the year 1925 more than 5,000 people have been admitted as patients, more than half of them from farm families. Had the hospital not been in operation, some of the major surgical cases would have been sent at great expense to city hospitals. Accidents and emergency surgical cases have received immediate skilled attendance under favorable operating conditions. Of minor surgical cases, such as tonsil removals and stopping hemorrhages, the greater number would not have been cared for without the hospital. Of the medical cases, practically none would have received hospital care. Home care would have doubled the cost. The quiet and rest of the hospital have a distinct value in treatment, according to physicians. Six hundred babies have been born in the hospital, the mothers and babies receiving there the expert assistance which is lacking in the home.

Value to community.—The health example has been inestimable. The people have learned that the hospital is not a place to go to die. They have found out that there are improvements on the old ways of home and neighborhood nursing and midwifery. From the hospital have come the influences for betterment of community life, school hygiene, better babies, better food supply; the value of cleanliness and pure, clean food in the sick room; the cleanly handling of infectious diseases, and the belief that competent nursing is half the battle in fighting disease.

Prevention as well as cure of disease has been taught. From February 1, 1923, when the chemical and bacteriological laboratory was established, to June 1, 1924, 1,497 examinations were made. Much valuable time was saved by not having to send delegate cultures to the State laboratory. As a result of the emphasis on individual health created by the hospital, the county has a county health unit consisting of a doctor and two nurses, established and maintained in cooperation with the Rockefeller Foundation. Before the hospital was built there were only two or three nurses in the county. Now there are 26 registered nurses in the county, the majority of them from Washington County and graduates of the county hospital training school.

Value to physicians.—The hospital has demonstrated its power to educate, not only the public, the patients, and the nurses, but also the physicians. A leading doctor reported that the doctors had doubled their efficiency in the diagnosis and treatment of disease through practice in a well-equipped hospital.

COUNTY-HOME HOSPITALS

In some States the need for a county general hospital has been met by building it in connection with the county infirmary, thus providing a place for the care of the sick of urban and rural communities with consideration economies as to expense.

COUNTY-HOME HOSPITAL, URBANA, CHAMPAIGN COUNTY, OHIO

A unique experiment in county hospitals has been successfully carried out in Champaign County, Ohio. It seems to offer suggestions worthy of consideration to rural counties which, on account of financial or other reasons, are unable to build and maintain a separate county general hospital.

Like most counties, it had a county infirmary situated about 2 miles from the town on a plat of ground of about 14 acres. On

FIG. 9.—The County-Home Hospital, Urbana, Ohio. Popular with all residents in need of hospital attention

the lot is a power-plant building and a good barn. In recent years there had been a considerable decrease in the number of those living at the infirmary, attributed by the superintendent and the matron to the lessened number of strong-drink addicts entering.

Adjacent to the infirmary there had been a small hospital for infirmary patients. Built in 1850, this had been condemned some years before. In 1912 the county commissioners voted bonds for a new modern hospital for the infirmary which was completed in 1913 at a cost, for building and equipment, of $20,000. (Fig. 9.) A number of the rooms were furnished by various organizations. The two-story building is of brick, 80 by 40 feet, with concrete flooring. There are 18 private rooms and no wards. Both floors have wide verandas with concrete floors, used as sun parlors. As the decrease in the number of inmates of the infirmary left some vacant rooms in the hospital, physicians of the town began sending their patients there.

During the World War, on account of scarcity of nurses, it was necessary to close the infirmary hospital. This was an inconvenience not only to the doctors but to the associated charities, which needed a hospital for its patients. There was some agitation for a new separate county hospital, but this was not successful.

At a meeting attended by the superintendent of the infirmary, the county commissioners, physicians, and business, professional, and other clubs, it was decided to make the infirmary hospital open not only to infirmary patients, but open to all residents of the county, as a regular county hospital. The chief consideration in this decision was one of economy. It had been found during the year when the hospital was closed that the expense of running the infirmary

FIG. 10.—The house staff at the County-Home Hospital, Urbana, Ohio. Their efficient service has helped popularize this institution

was not lessened. This is accounted for by the fact that the hospital as an open institution more than maintains itself, the excess of revenues over expenses going into the county treasury to the credit of the infirmary. The same superintendent, engineer, matron, and other infirmary help are in charge, with no increases in salary. The heating, light, and refrigerating plants, water system, kitchen, and laundry of the infirmary are available for the hospital, as are the products of the farm and herd maintained by the infirmary. The chief expense of the hospital is the salaries of the seven nurses. One is a graduate nurse and the others are pupil nurses, members of the training class for nurses maintained by the hospital. (Fig. 10.) They are enrolled from the county and receive $25 a month, room,

board, and laundry. In addition there is an expense of $50 a month for outside help. The expense of running the infirmary has not increased. Infirmary patients treated at the hospital are paid for by the county, and temporary indigent patients are paid for by the townships that send them.

The rates for pay patients in the private rooms are from $2.50 to $3 per day. Fee for use of operating room is $5. A rate of $50 is made for maternity patients, including use of private room, delivery room, board, and nursing. Fees for indigents sent by townships are the same.

Hospital receipts, Sept. 30, 1922, to Oct. 1, 1923		$8,413.84
Expenses, Sept. 30, 1922, to Oct. 1, 1923:		
Salaries of nurses	$3,223.59	
Drugs and medicines (hospital and infirmary)	791.89	
		4,015.48
Excess of hospital receipts over expenditures to go to the support of the infirmary		4,398.36

During the year there was an average of eight patients per day in the hospital, with an average length of stay per person of 10 days.

The hospital, like the infirmary, is under the control of the county commissioners. One superintendent, appointed by the county commissioners, is in charge of both institutions. The hospital is under the immediate direction of a head nurse, assisted by six student nurses. Any physician in the county can take patients to the hospital. Any patient may summon any physician or surgeon he wishes. Surgeons from Springfield and Columbus often come there to operate. At first the people naturally felt some hesitancy in using the hospital of the infirmary, but the convenient, well-equipped building, excellent medical and nursing staff, low rates, and the actual visible medical and surgical results have changed this and the name, County Infirmary, was changed to County Home. Now, all people in the county, rural and urban, use the hospital for general medical and surgical purposes.

The mayor of Urbana, a local physician, says:

We all like it. Clean building, good nursing, excellent food. Our best people, farming and town, go there. It costs about one-half as much as the average city hospital. Much used for maternity cases. Every physician recommends it. Every week specialists come from Columbus to perform operations. I had seven farmer patients there last year for operations. Took three patients away the last three days. I have reserved rooms for three farm women for confinements. Have heard no criticisms. Pleased with the way farmers take up with it. Could not get along without it. The town couldn't maintain a hospital except by heavy endowment. The county could not have a hospital except in this way. Think it ideal for a rural hospital. Would recommend this system for every county.

The county deputy treasurer says:

Very successful and satisfactory. The hospital receipts have helped out the infirmary. Since the hospital started it has been possible to reduce the tax levy. Tax rate, 1922, for poor fund (infirmary) was four-tenths of a mill. For 1923 it was thirty-two hundredths of a mill, resulting in a levy of $4,000 less.

Representative of State examiner's office says:

During the period covered by this examination, August 19, 1920, to April 20, 1922, the superintendent of the county home has turned into the county treasury from the hospital, $10,917.72. Judging from receipts and expenditures the place as a whole seems to be a profitable one. We could hear nothing except worthy commendation for said institution.

TOWNSHIP HOSPITALS

State permissive legislation for the establishment of local-government hospitals erected by taxation through vote to the people has been on the increase since the first county general hospital law was adopted. Not only have a number of States enacted county hospital laws, but one at least, North Carolina, enacted a township hospital law in 1917.

SHELBY TOWNSHIP HOSPITAL, SHELBY, N. C.

Shelby Township has a population of 8,409, of whom 3,609 live in the town of Shelby. The question of voting bonds for the erection of a township general hospital was submitted to the people of the township and carried by a very large majority, the proposition being well supported in the rural communities. The hospital was dedicated in August, 1923. The building was open to the public and the citizens of the township attended in large numbers. It was a great demonstration of the interest rural people take in a hospital they can call their own.

FIG. 11.—The Township Hospital, Shelby, N. C.

The building, situated in a commanding position in the suburbs, is of red brick, with two floors and basement. (Fig. 11.) In the main building and annex there are 45 beds for patients. There is a special refrigerating room. All floors are of noiseless composition material. The building for colored patients is a one-story brick structure.

Two hundred yards from the hospital is the home for the nurses, a two-story frame building. The plant cost $109,000, distributed as follows:

Contract for main building	$43,074
Electric lighting	1,200
Plumbing	4,400
Heating	3,350
Fire sprinklers	3,300
Elevator	1,800
Architect	1,250
Supervision	1,200

Grounds, 14 acres	$14,000	
Landscaping	1,000	
Shrubbery	850	
		$15,850
		75,424
Furniture, supplies, and miscellaneous		24,576
House, remodeled for nurses' home		4,000
New hospital for colored people		5,000
Total cost of plant and equipment		109,000

The institution was financed by the $100,000 in bonds voted by the people and drawing interest at 6 per cent, which were sold for $107,000, together with the $2,000 raised by different societies in Shelby and other communities in the township to furnish rooms.

Financial report of Shelby Hospital, August 19, 1923, to August 19, 1924

Total collections from all sources	$22,682.40
Deposited September, 1923, to the credit of the hospital by the secretary and treasurer	1,000.00
Total on hand	23,682.40
Total disbursements for year	22,822.76
Balance	859.64
Collectible accounts (good)	1,080.35
Supplies on hand (gauze, cotton, drugs, food, linen, china)	1,500.00
Coal on hand	150.00
Stationery and office supplies	150.00
	2,880.35
Receipts:	
Board for patients	15,345.50
Board for graduate nurses	625.00
Operating room and dressings	2,878.10
Laboratory	1,051.15
X-ray	1,025.50
Special nurses	394.00
Drugs	469.49
Sundries	339.26
Anesthetics	530.00
Donation	24.40
	22,682.40
Disbursements:	
Salaries (nurses and technician)	7,990.67
Salaries (servants)	3,123.50
Food	5,096.53
Laundry (nurses' and house)	1,391.25
Ice	136.50
Fuel	565.37
Telephone	163.10
Supplies (household)	1,871.13
Supplies (medical)	553.75
Supplies (surgical)	1,209.97
Sundries	579.03
Training school	141.96
	22,822.76

MAIN HOSPITAL RATES

Wards	$2 per day	Major operations	$75 to $100
Private rooms	$4 to $6	X-ray	$10 to $25
Minor operations	$10 to $25	Maternity delivery fee	$10.

Staff and salary list (monthly): Superintendent, $150; assistant superintendent, $125; night supervisor, $100; laboratory technician, $125; 10 pupil nurses at $10 each the first year, $12 the second year, and $15 the third year; janitor, $50; servant, $50; cook, $45; assistant cook, $36. Board, lodging, and laundry are furnished.

In the hospital for colored people there is one graduate nurse. Rates for two-bed rooms here are $1.50 per day. Other rates are about half those of the main hospital.

The county allows $2,000 per year to the hospital for charity patients outside of Shelby Township. When the hospital was opened, the township transferred to the superintendent $1,000 for running expenses, and the hospital has since maintained itself.

The hospital is controlled by a board of 15 trustees appointed by the mayor and board of aldermen of the town. At present three of the trustees are women. Of the men, two are farmers and one is a

FIG. 12.—A convalescent in the sun parlor of the Township Hospital, Shelby, N. C.

physician not now in active practice. The board of trustees appoints the superintendent, who in turn appoints the minor officials. The superintendent has full charge of the conduct of the hospital, and is responsible only to the board.

The number of patients in the hospital daily averages about 20. About one-third of the patients are farmers. Any regular physician is allowed to bring patients to and treat them at the hospital.

This township hospital (fig. 12) has made a good beginning and stands well among farming people.

TOWN HOSPITALS

Rural hospitals may be established by a political division consisting of a small town where that town is the center of a farming community. A county or a community hospital may seem impossible to attain or inadvisable. It may seem to the proponents of the town-hospital idea that control and operation concentrated in the compact area of a town would be more feasible. Often that much-

to-be-desired spirit of cooperation between town and country is lacking, and town people, oblivious of their dependence on agriculture, rear their own institutions without regard to the needs and wishes of the farming community. Such hospitals are usually open to the farm population and are frequently so used, too often, however, as an alien institution rather than as their own.

Thoughtless disregard of the needs of country people sometimes results in needless financial difficulties for the hospital. A wise town-hospital management seeks to overcome any apparent feeling of neglect on the part of rural people. By making its service attractive to them and revealing to them its power of helpfulness, the hospital not only may overcome unjust rural suspicions and greatly extend its field of usefulness, but also may erect for itself a more enduring financial foundation.

FIG. 13.—A private residence was made over into a town hospital, Savanna, Ill.

SAVANNA HOSPITAL, SAVANNA, ILL.

Savanna is a town of 5,237 population, situated on the western limit of Carroll County, which has a population of 19,345 and an area of 453 square miles. The town is surrounded by a rich farming area and is 10 miles by rail from the county seat. For several years there had been agitation for a hospital but no well-directed campaign. A mayor with a genius for leadership, supported by a council of the more progressive type, adopted the proposition in 1918 and within three years brought it to a successful conclusion.

To finance the institution the council voted a 3-mill tax levy, which produced about $3,500 per year. In 1921, after nearly three years had elapsed, there was an accumulated fund of $9,000 to finance a hospital. The committee on site, appointed by the mayor, recommended the purchase of a valuable residence property, centrally located and consisting of a capacious, substantial dwelling in

Thus, for 1924, the income of $9,865.56, received from operating the hospital, was supplemented by $2,276.31 from the annual municipal tax in order to pay the expenses of operation.

The hospital receives considerable support from "tag day" receipts and from an annual "gift day." The members of the farming community give on that day large quantities of fruit and vegetables.

Charges for beds in wards are $3 per week; for private rooms, $4 to $5 per week. Operating room charges are $5 for minor and $10 for major operations (fig. 14). In maternity cases there is a fee of $5 for the use of the operating room and $10 for the care of the baby from 10 to 14 days, with linen and other necessities for the baby while there.

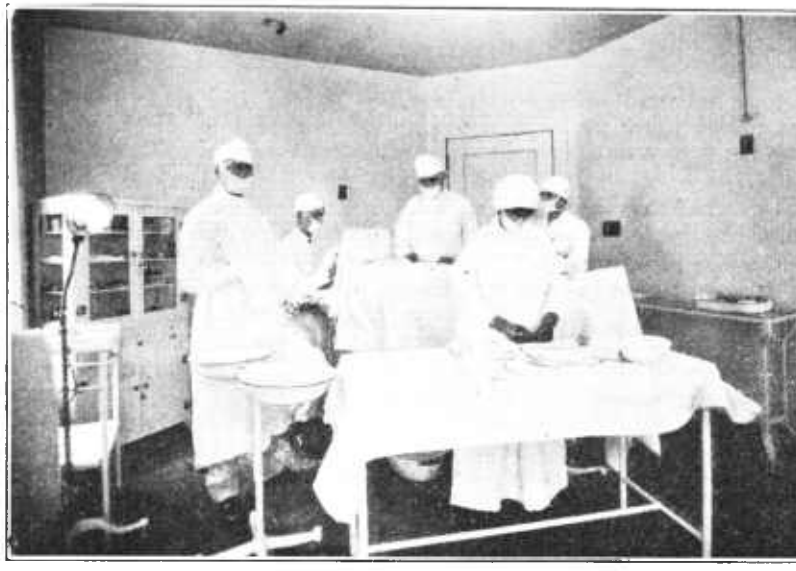

FIG. 14.—Infections are carefully guarded against during operations at the town hospital of Savanna, Ill.

The institution is controlled by a board of three trustees appointed on alternate years by the mayor and reporting quarterly to him. The board appoints the matron, who has direct charge of the hospital. She appoints the assistants, purchases supplies, keeps the accounts, conducts the routine of the hospital, and is, in fact, a head nurse and business manager, responsible only to the trustees.

There are no doctors on the board of trustees now, nor is there an organized advisory medical board, although the local doctors are frequently consulted on matters of policy. Any physician is allowed to bring a patient to the hospital and a patient may call any physician. In addition to the superintendent, the staff includes two day nurses and one night nurse, all of whom are graduates of other training schools, since there is no training school in connection with this hospital.

During the year 1924 there were 262 patients in the hospital. Seven were there at the time this study was made. About half the patients are from out of town, one-third being from the country.

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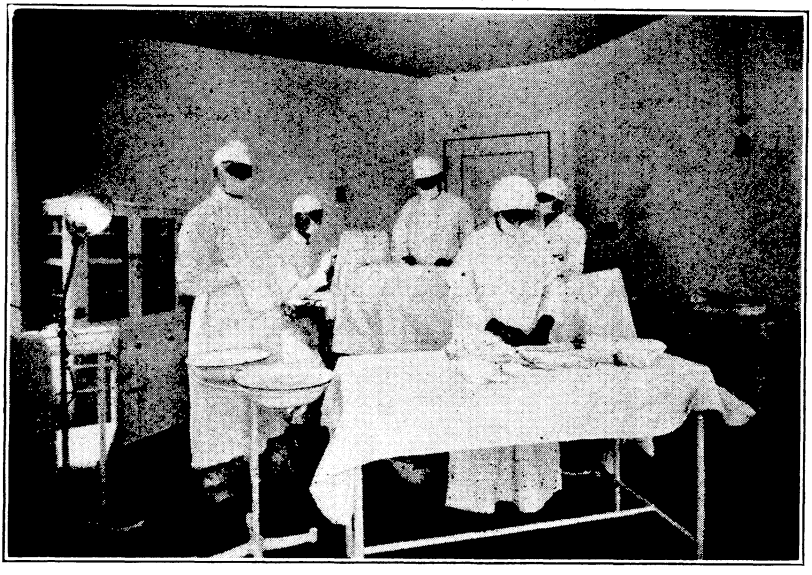

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There were two charity cases in 1924, and the bills of 10 patients were uncollectible.

There would seem to be an opportunity at this town hospital, as at many similar ones, to make more widely known its availability to members of the farming community, with resultant benefit in hospital service to the farmers and to the hospital in fewer empty beds and a better financial showing. As the hospital is a town institution aided by town taxes, it is natural that those who conduct it do not look far beyond the town limits. As farmers have no part in its control, ownership, or management, it is natural that they should look upon it as for the town only, in much the same way that they look upon the town waterworks or electric-light plant. Active cooperation between the two elements would contribute to the welfare of both.

DISTRICT HOSPITALS

Local political units in the United States and their limits were determined upon at an early stage of our history at a time when population was meager and the social and economic activities of the people, as evolved by group action, were less diverse. Sufficient during our early growth, these units and boundaries have sometimes been found to be a needless restriction on governmental group action as population later has become more dense and as the various activities of the people have assumed more complex proportions. To overcome these restraints a tendency has recently appeared for local groups who want combined group action, but are restricted in the extent of such action by fixed local political boundaries, to seek and secure permissive State legislation enabling them to combine local political units into larger units for more efficient public service.

Local rural political groups who want to establish hospitals, but are limited as single units in the matter of finance and effective control, are beginning to adopt this method to accomplish more efficiently their humanitarian aims. This method may be adopted by groups confronted by any or all of the following conditions: (1) Where single local groups have insufficient financial resources as separate units, or are too restricted in population to initiate the enterprise effectually or to furnish the required number of patients upon which the financial success of a well-equipped hospital depends; or (2) where the central group may be strong enough financially and in population to finance and maintain a hospital, yet wishes to have surrounding groups represented in the control because the outer units will furnish a large number of the patients; or (3) where a foundation of strong, efficient, permanent administrative control is desired.

DISTRICT HOSPITAL, BEREA, OHIO

There has been considerable agitation for a hospital near Berea, Ohio, for some time. A nurse had tried to meet the situation with an improvised hospital in her own home. The death of a Berea doctor who had been arousing sentiment for a public hospital finally brought the matter to a head.

The region is composed of the following communities: Middleburg Township, Olmsted Township, Brook Park village, Strongs-

ville Township, all in one county, and Columbia Township in the adjoining county, with respective populations of 4,963, 1,472, 861, 1,285, and 988, and total population of 9,569. As these communities composed a rather compact group, containing most of the people who would naturally use the hospital, it was desired to form a unit for hospital purposes. There was no State law, however, permitting people of separate political units to combine in order to tax themselves to build and maintain a hospital. To permit this, a law was put through the State legislature.

Then the Berea Community Hospital Association was formed. It was originally intended to build the hospital by public subscriptions and a drive was put on to raise $100,000. After $65,000 subscribed by 3,000 people had been paid in, an amount insufficient to build the kind of hospital wanted, it was decided to purchase and equip a temporary building. Subsequently, conforming to the permissive provisions of the new State law, the people of the separate townships voted a 0.75-mill tax for 10 years to build a hospital at an estimated cost of $100,000 and to maintain it. Meanwhile, the foundation of the new building had been completed from subscription funds which were still coming in.

Not wishing to await tax collections and needing immediate funds to go on with the work, the old building and equipment and partially constructed new building were mortgaged, with consent of the court of common pleas, for $100,000. Bonds of $100,000 were then voted on the mortgage by the people in anticipation of future tax collections. These bonds were not local government bonds, but hospital corporation bonds. Provisions were included in the mortgage to the effect (1) that the first charge on collected taxes should be payment of interest on and retirement of bonds as they became due, a sinking fund having been created for this purpose, and (2) that money realized from the sale of bonds must go into construction work. It is provided that when the 10-year levy is completed, the people of the townships may vote another tax for maintenance purposes. The tax levy on each township is independent of the levy of the other townships, not being conditioned by the results of the votes in other townships. At the time a 0.75-mill tax was decided upon, it was anticipated that this would bring in $100,000, but a later appraisal places the figure tentatively at $180,000.

Governing power of the hospital rests in a board of trustees, three from each township, elected by and representing the people of the township, and one from each township elected by and from each township board of trustees, the latter being the usual governing body of each township. The original law provides for the one representative on the board elected by township trustees. The character of incorporation provides for the three representatives of the people of each township. To determine the latter, the constitution, adopted by the whole organization, provides that annually each listed public organization in a township may send one delegate to a township convention which shall elect one representative to serve three years on the hospital board of trustees. Thus the people of each township are continually represented by three members on the board. The board of trustees was incorporated, but not the association itself.

The constitution provides that the members of the five township conventions of listed delegates shall meet annually to receive reports concerning the operation of the hospital, consider recommendations from any community, submit resolutions to the board of trustees, and to consider any business brought before it by the board. It provides that the board shall elect a president, first and second vice-presidents, a secretary, and a treasurer. It provides for an executive committee consisting of the officers and one member appointed by the president, to act between meetings of the trustees, except in matters of policy, its proceedings to be submitted to the regular meetings of the board of trustees, which are to be held at least monthly. The board appoints the superintendent of the hospital, who selects the staff. The doctors of the district, nine in number, compose the consulting medical staff. There are no doctors on the board of trustees. Six farmers are on the different hospital-governing bodies.

According to a provision of the original law, each township must take care of its indigent sick, township trustees having power to recommend the entrance of such to the hospital.

The hospital was opened in the temporary building in August, 1920. For this building $30,000 was paid. This was considered one-half its value, the other half being in the form of a gift. A cash payment of $20,000 was made, the remaining $10,000 to be paid in the form of an annuity of $500 per year to the owner.

This building, consisting of two stories and basement, provides for an office, six wards, a private room, a kitchen, an operating room, an X-ray room, laboratory, toilets, and baths. Eighteen beds for patients are included. From January 1, 1924, to January 1, 1925, there were 441 patients and 64 births in the hospital. The staff, with monthly salaries, is as follows: Superintendent, $135; assistant superintendent (surgical), $105; doctor for X-ray and laboratory work, $200; night supervisor, $95; five graduate nurses, four at $90, and one temporary at $85; an acting hospital secretary, $100; janitor, $65; cook, $100; and cook's helper, $45. Room, board, and laundry are included for all these except the X-ray doctor, who comes to the hospital three days per week, or at emergency calls. A charwoman receives 35 cents per hour.

Hospital rates are $22 per week for wards and $35 to $40 per week for private room.

Statement of receipts and disbursements

Cash balance, Jan. 1, 1924	$538.67
Receipts from operating	21,143.96
Receipts from taxes	11,083.61
Receipts from bond sale	70,500.00
Receipts from subscriptions paid	3,114.23
	106,380.47
Operating expense	26,456.22
Building and equipment	70,745.22
Interest	1,326.00
Cash balance, Jan. 1, 1925	7,853.03
	106,380.47

The difference between $26,456.22 for operating expense and $21,143.96 for operating income amounts to $5,312.26. This apparent loss was offset by accounts receivable of $8,451.38 due the hospital, but not yet collected, from patients who had received medical aid.

Bids were opened for the construction of the new building in April, 1923. At the time this study was made, in March, 1925, it was practically completed and has since been opened for use. Its estimated cost was $110,000. It is a modern two-story, high basement, brick building providing 30 hospitals beds. (Fig. 15.)

General satisfaction is felt by the people of the Berea region in the success of their hospital plan. As time passes and more attention can be given to maintenance and less to construction costs; when a more successful scheme of collection of accounts is worked out; and when more information as to the value of the hospital is

FIG. 15.—Public subscriptions and taxes voted by the people financed this $100,000 district hospital at Berea, Ohio

made available, especially to the farming community: then, even from the most conservative financial standpoint, the Berea hospital plan may serve as a model for other communities, as it already serves to point the way.

COMMUNITY HOSPITALS

The people of rural communities are awakening to the advantages of having their own hospitals and are themselves taking the initiative in establishing them. Although they believe that health security is as important a governmental activity as education, transportation, and public security, they do not always wait for the process of governmental initiative, but take direct action. This is especially true where State legislatures have not yet made it possible for counties or townships to tax themselves to build and operate hospitals. Such hospitals are usually built by public subscription or by organizing a stock company and selling shares to a large

portion of the community. In such cases they are incorporated under the laws of the State in which built.

Requisites for establishing and maintaining such hospitals would seem to be an intelligent electorate, stimulating local civil leaders, doctors whose creed is service, a spirit of democracy and fellowship in the community, and a disposition to keep politics, religion, and special-interest domination out of hospital management and control. Such hospitals have been in existence too short a time to weigh finally their advantages or defects, as compared with other kinds of hospitals, or to measure their permanence. From judgments based on the number that have been studied, they compare favorably in every way with other kinds of hospitals. In fact, they seem to be operated to more favorable financial advantage, usually with a balance on the credit side of the ledged.

HUTCHINSON COMMUNITY HOSPITAL, INC., HUTCHINSON, MINN.

Little Crow, leader of the Indian band that massacred the citizens of New Ulm, Minn., in 1862, also led a band which burned the stockaded frontier hamlet of Hutchinson. In 1922 Flying Earth, his granddaughter, a trained nurse in a Minneapolis hospital, made a speech at the dedication of Hutchinson Community Hospital, expressing regret at the act of her grandfather and characterizing a hospital as a place "to heal all wounds."

The town, of 3,379 population in a county of 20,444, is the largest in the county, but is not the county seat. Somewhat off the main lines of travel, in the south-central part of the State, it is a typical rural village, largely evolved from and financially dependent on the farming community about it, whose chief industries are dairy and grain farming. The region is one from which might be expected successful community enterprises, for there are farmers' cooperative creameries, grain elevators, and shipping associations, and in the town is an armory, jointly built by State and city, open for all public purposes and the headquarters of a live company of State militia. With good schools, good churches, good cooperative organizations, what more natural than a good hospital?

That they knew just what they wanted and why is shown in a paragraph of their articles of incorporation, stating the purpose of the corporation:

> Its general purpose shall be to own, maintain, and conduct at ——— a community hospital for the use and benefit of the general public and the medical and surgical professions; to conserve and improve the public health, and relieve physical suffering and encourage and cultivate an understanding of hygiene and sanitation.

After two years spent by active community leaders in shaping public opinion, the Hutchinson Community Hospital Association was formed and incorporated under State laws, directors and a building committee were elected. Membership in the association was obtained by the purchase of stock at $10 per share, issued to secure money to finance the erection of the building. Community interest among town people and farmers was sustained in the purchase of stock and in friendly rivalry among various organizations in raising money.

On September 19, 1922, the new hospital was dedicated, with the governor of the State and William J. Mayo present.

The building, of reinforced concrete and brick, has two stories and high basement and is well situated, facing the park. (Fig. 16.) It has four wards and seven private rooms. The operating, sterilizing, and obstetrical rooms are furnished with the most modern equipment. It has terrazzo floors and is equipped with an elevator and a dumb-waiter. The cost of the unfurnished building is itemized as follows:

General contractor	$24,449.00
Heating contract	5,709.00
Plumbing contract	2,992.00
Electrical construction	1,756.46
Total	34,906.46
Cost of site	4,500.00
Total for building, heating, lighting, plumbing and site	39,406.46

FIG. 16.—Public subscriptions from 376 farm residents and 525 town people financed the Community Hospital, Hutchinson, Minn.

The building and equipment was financed in the following manner:

2,232 shares of $10 per share nonassessable stock purchased by 525 town subscribers	$22,320.00
1,754 shares purchased by 376 farmers	17,540.00
Total receipts from 901 paid-stock subscriptions	39,860.00
Receipts from entertainments by farm and town organizations for equipment	1,640.00
Total by stock-sale and organization subscriptions	41,500.00

Operating-room equipment and other utensils to the value of $2,200 and further equipment has since been paid for by operating receipts, entertainments, and gifts. Different lodges and societies assumed the furnishing of different rooms at costs of $150 for private rooms, $250 for two-bed wards, $350 for three-bed wards, $150 for obstetrical room, and $100 for the office. (See fig. 17.) Hospital campaign expenditures totaled $346. Stock to the value of $10,000

was later redonated to the hospital by 200 purchasers. One estate has willed its residue, $3,000, to the hospital.

On July, 1924, there was a debt of $5,000, the result of purchase of equipment and supplies and some unpaid subscriptions. A number of unpaid shares were redeemed, after the purchasers became

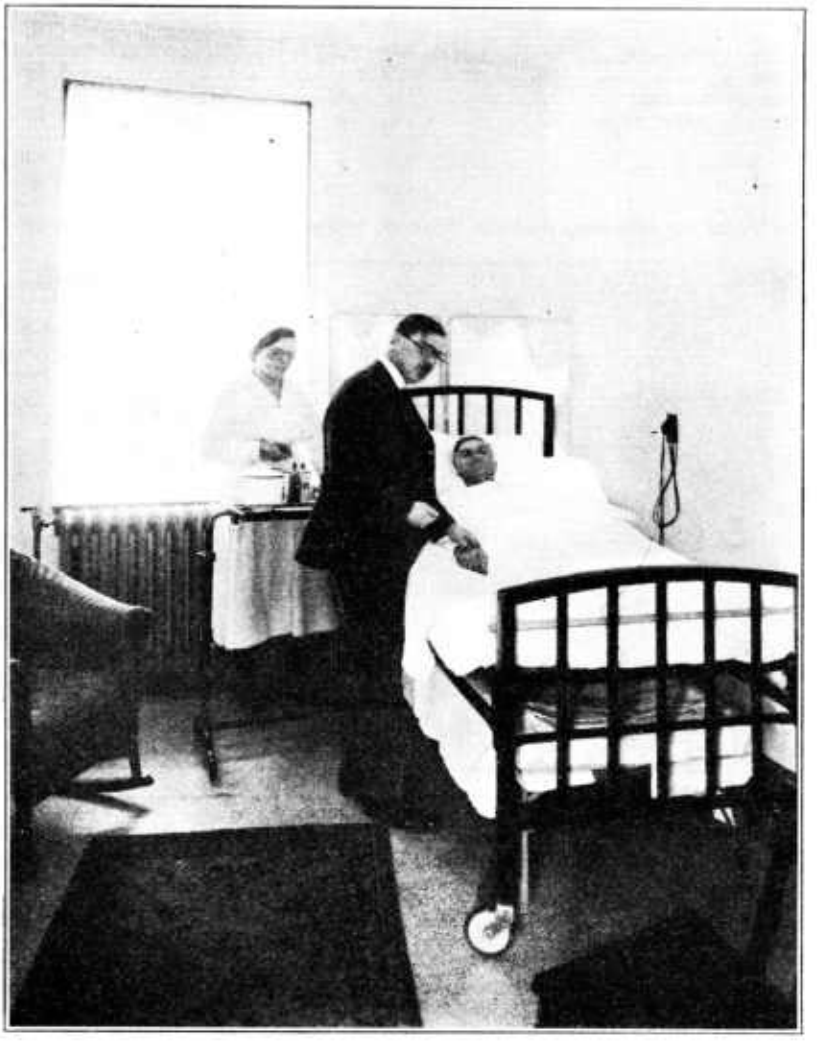

FIG. 17.—Patient, nurse, and doctor in private room at Community Hospital, Hutchinson, Minn.

patients in the hospital. The debt is being reduced by hospital receipts and Christmas gifts. The result of a Christmas-gift campaign in which letters were mailed in December, 1924, was as follows: From 110 town people, $374.06; from 88 country people, $192.00; total receipts, $566.06; expenses, $98.35; profit, $467.71. All donors were individuals except the Up-and-Doing Club of farm

women. Quantities of canned fruit and vegetables are received as gifts. No dues as contributions are required from any members. From its inception the hospital assumed a healthy financial status with excess of receipts over expenditures.

Statement of receipts and disbursements for the year 1924

Receipts:		
From patients		$14,116.72
Donations		796.00
Stock collections		263.30
Discounts		72.96
Interest earned		12.25
		15,261.23
Disbursements:		
Coal		779.10
Expense general		883.07
Insurance		26.92
Interest		595.00
Kitchen supplies		2,968.65
Light and power		382.96
Laundry		1,468.68
Office supplies		69.74
Room rent allowance		202.87
Repairs and improvements		108.82
Salaries, janitor		1,052.00
Salaries, maid		338.75
Salaries, kitchen		511.25
Salaries, nurses		4,919.01
Total		14,306.82
Total cash on hand		954.41
Total		15,261.23

Statement of assets and liabilities for the year 1924

Assets:		
Building and grounds		$42,643.04
Citizens' Bank		409.23
Coal		20.00
Farmers' and Merchants State Bank		346.12
Furniture and Fixtures		3,413.91
Kitchen supplies		275.92
Linens and bedding		504.49
Medical supplies		698.85
O. B. room		106.00
Operating room		362.05
Sterilizing room		1,147.50
Accounts receivable		1,124.25
Total		51,051.36
Liabilities:		
Capital stock		38,246.35
Accounts payable	$919.25	
Notes payable	8,500.00	
		9,419.25
Surplus		3,385.76
Total		51,051.36

The board appoints a consulting staff of physicians and surgeons, an auditing committee, and the superintendent of the hospital, who

appoints the remainder of the hospital working staff. In practice, one member of the board of directors is elected from each of six townships through group caucuses at the time of the regular township elections. The other directors are from the town. The executive committee is from town, in order to have a quick-acting body. Any physician may bring patients to the hospital, and any patient is free to select any physician. In cases where physicians are unknown to patients they are selected from a rotating list. Each patient pays the bills of his attending physician. Seventy-five per cent of the patients are rural. The average daily number of patients is about 13.

Knowing that the success of a hospital depends upon its patronage and that the community should be informed regarding its own business, and believing that they have a great public necessity, the directors make known to the public what they have to offer. Hospital week is always celebrated and information in regard to the hospital is broadcast by radio at that and other times. The local paper is used for the same purpose and to suggest occasional need of fresh fruit and vegetables. Ministers in the churches are encouraged to give hospital talks. To call attention to the value of the hospital for maternity patients, 25 citizens donated $25, to be used in presenting $1 to each baby born in the hospital during the first six months of its operation.

From their experience in establishing and maintaining this kind of hospital the officials offer the following advice:

(1) Give careful attention to the form of stock certificates in order that the buyer can not go back on his promise to pay. It should be in the form of a legal agreement. Write on the back the name of the solicitor, remarks, etc., in order that solicitor can identify purchaser.

(2) Create careful, courteous, thorough interest in the hospital project, making no promises or predictions impossible to fill.

(3) Have no nurse or doctor on the governing board. Doctors should be on the medical consulting staff.

(4) Have no axes to grind.

(5) Distribute purchases of supplies fairly among local merchants.

(6) Arrange so that no one concerned with the management is able to profit financially through the operation of the hospital.

COMMUNITY-PRIVATE HOSPITALS

What of a community that is completely rural? One where old-fashioned small farming is practically the only industry? One with a small village which serves merely as a service station for the surrounding farming population? A community off the main line of travel with transportation facilities which make it difficult for the sick or injured to go to the distant city hospital? One with slight influence at the county seat whose needs, therefore, may be neglected. One of those many rural communities from which the old type of family doctor has largely disappeared—the type which finds its highest reward in service to humanity? What of the thousands of communities in the United States which for some reason do not feel able to build a hospital?

Some such communities are solving the problem by combining with the local physician and organizing a community hospital association, which unites with the physician in financing the institution. Such a solution is not ideal, but until conditions change these communities have the service of a good hospital by means of properly sustained relation between community and physician.

A Community-Private Hospital, Addison, Mich.

The Addison community, Mich., consists of the 416 inhabitants of the village of Addison, and the actual farming community extending for several miles around it, whose members make use of the village as their service station for matters of business, religion, education, health, and recreation. The community is enlightened and progressive. It is on a branch-line railway and to reach the nearest hospital a transfer to a main line is necessary.

The community still retained the old-time family doctor, but his advancing age caused the people to take stock of the future. What would become of them when the last old family doctor was gone? They had been cheerfully paying their taxes each year to support the training of doctors, but the graduating doctors did not seem to come their way. First, they adopted the slogan so universally recommended for farmers, "Farmers must help themselves."

In 1921 the community club, an organization with a farmer president and largely farmer membership, placed an advertisement for a doctor in a national medical journal. After some negotiations and after some acceptances which did not prove suitable, in response to a later advertisement there arrived in the village a young man who had brought himself and all his belongings in an automobile from Maryland. Graduating from a medical school just before the World War, he had gone through the struggle and had decided to place his services where most needed. From the great, finely equipped modern hospitals of Baltimore and the constant high-pressure surgical practice among the soldiers to the quiet practice in this peaceful farming community was a great change. But here was the call and here the opportunity for service. During the study made of this hospital two local comments were prevalent: "The doctor will go anywhere any time day or night," and "He doesn't seem to care for money as such, only for what he can do."

The people were in a receptive mood. The doctor had, fortunately, been successful with difficult operations performed under trying circumstances, but he wanted to increase the chances of success of operations or recovery from sickness by a local hospital with a competent nurse and good equipment. The doctor was financially unable to establish a hospital himself. Besides, he wanted the community to be interested in the enterprise. The Community Hospital Association was formed, which represented the people. From this association was evolved the Addison Hospital board, which with the doctor carried through the business of establishing the Addison Community Hospital.

The provisional understanding between the contracting parties was that the doctor should purchase or erect the hospital building and furnish the medical and surgical supplies and that the community should equip it, the institution to be the property of the

doctor where he could practice his profession. All this was subject to a future agreement should the doctor discontinue his practice or dispose of the institution.

Practically every organization and individual in the village and farming section joined in the enterprise. Various methods of raising money were resorted to. The doctor had asked financial aid from the community to the extent of $1,200. At the end of the campaign the hospital board, representing the community, found itself in possession of $1,689.80, raised as follows:

Local subscriptions within the village by 9 societies, 7 business firms, and 54 families and individuals	$848.83
Local subscriptions outside the village from 4 societies, 4 stores, 56 farmers, and 1 former resident	585.00
Voted by the village government	255.97
	1,689.80

The young doctor, meanwhile, had contracted for the purchase of a building in the center of the village. When it was ready for use, it represented an outlay of $7,189.80 raised as follows:

Cost of original building, by doctor	$4,500.00	
Surgical and medical equipment, by doctor	1,000.00	
Total by doctor		$5,500.00
Equipment, by community and village	1,198.67	
Repair of building, fixtures, wiring, sinks, plumbing, hardware, paint, by community and village	491.13	
Total by community and village		1,689.80
Total cost of completed institution		7,189.80

The agreement between the doctor and the community is as follows:

This agreement, made this 6th day of January, A. D. 1923, by and between ———, M. D. of the village of Addison, county of Lenawee, State of Michigan, party of the first part, and the Addison Hospital board, namely, ——— * * *, or their successors, party of the second part.

Witnesseth, that the said party of the first part covenants and agrees to and with the party of the second part or their successors, that should he decide to discontinue his practice in said village of Addison as a physician and surgeon, he will turn over to said Addison Hospital board, or their successors, the good will and benefits thereof together with all the fixtures, furniture, surgical and other instruments and apparatus, including all linen, bedding, and furnishings of every kind supplied or paid for from the public fund provided by public subscription, and that same shall be checked with the original invoice hereto attached.

Said first party further agrees that in case of sale of the real estate known as "The Addison Community Hospital" he will turn over the amount of $1,100 to said board or their successors, as representatives of the subscribers, said sum being the amount expended for materials and labor used in remodeling said building inclusive of wiring and electric fixtures, a statement of said expense being hereto attached.

The said hospital board, or their successors, known as party of the second part, hereby enter into said agreement with said first party, said agreement being created for the purpose of protecting the interest of the subscribers whose aggregate amount represents $1,689.80 and used for the purpose of establishing an institution for the treatment and care of the sick.

The two-story building, 50 by 22 feet, is of concrete blocks. (Fig. 18.) The different societies still furnish linen and similar supplies as needed. In addition, the 55 members of the womens' club take turns in visiting patients and keeping them supplied with flowers.

The hospital is maintained entirely by fees which were authorized by the Community Hospital board: $2.50 per day for private rooms and $2 per day per person for double rooms. Rates for major operations are from $100 to $150; minor, from $10 to $50. A maternity rate for 10 days is $50 for hospital and $25 physician's service. There are two nurses—one lacking three months of graduation, at $75 per month, board and room; and the other in training, at $50 per month, board and room. The janitor receives $2 per week. Food for nurses and patients at present from outside the building.

A resolution of the board provides that the physician "may admit for treatment charity patients, providing the supervisors of the townships from which the patients come authorize the payment

FIG. 18.—Addison Community Hospital, Mich. The physician and this woman visitor are locally given the chief credit for the success of the enterprise

of expenses." No worthy patient is ever refused admission. Another resolution of the board provides that "Addison Community Hospital be open to all physicians in good standing." The doctor's private office is in the building, this reducing the expenses of the hospital for heat, light, etc.

From the opening of the hospital until January, 1925, there had been 144 patients (90 per cent of them from the farms), including 20 confinement patients. (Fig. 19.) Three successful Cæsarean operations had been performed. During this time the hospital was operated at a loss to the doctor of $2,877.36. There is no complaint from the doctor, however, for the gain from his practice more than makes up the loss in conducting the hospital.

The result of this rural doctor hospital experiment is seemingly complete satisfaction on all sides. The doctor and the hospital

stand very high in the whole community—a standing based on unselfish service. For some time this present four-bed and possible five-bed hospital has had a waiting list. The striking result is that a campaign is now on by community and doctor to raise funds to expand the institution under an agreement similar to the previous one. And with the farm women back of the proposition success is assured. Witness the testimony of one farm woman as of March 6, 1925:

The Country Woman's Improvement Club is a literary organization composed of 23 busy farm women. Last fall we wanted to take up some work that would benefit the whole community, and so we decided to furnish a room at the Addison Community Hospital. It was estimated that the cost would be between $150 and $200. We felt that we could in this way do

FIG. 19.—A contented mother at Addison Community Hospital, Mich.

something really worth while for the community and show our recognition and appreciation of the exceptionally splendid work of the surgeon in charge. (Mrs. Gladys White Hudnutt, president.)

The whole community is responding. A standardized hospital is the goal. (Fig. 20.)

SOUTHERN MOUNTAIN HOSPITALS

When the mountaineer farmer patriots of North Carolina, Virginia, and Tennessee marched down into the lowlands of North Carolina during the critical days of the Revolution, coming to the aid of the stricken patriots of the lowlands at King's Mountain they rendered a service to the people of the Nation which, long unrecognized, is now being partially repaid. For many of the

descendants of these and others who followed the Wilderness Trail, from whom came Abraham Lincoln, have since lived in the secluded recesses of the mountains, neglected by governing authorities, almost forgotten by their more fortunate compatriots, and isolated from the advancing influences of civilization. With negligible railway facilities, poor communication, few schools, roads often impassable, and scattered churches, a retarded group of 5,000,000 people have been left largely to themselves.

Probably no one thing had so detrimental an effect on them as the lack of knowledge of those rules of health, sanitation, and right living, which have been discovered and absorbed by the outside world. Overcrowding, poor light, and inadequate heat in mountain homes; the absence of sanitary toilet arrangements; ignorance

FIG. 20.—Farm women, members of the Wheatland Improvement Club, which is raising $200 to equip an additional room for Addison Community Hospital, Mich.

of dietetics and the transmission and prevention of disease; belief in superstitions born of isolation; early marriages, with high infant and maternal mortality; and the absence of modern doctors, trained nurses, hospitals, dispensaries, and clinics, together with a natural tendency to drown their troubles in native drink—all have resulted in making these mountain people an easy prey to individual disease and communal epidemics. In one county of 10,566 inhabitants, for example, it was found during an examination by the Rockefeller Sanitary Commission, in 1913 that, of 4,957 persons who were examined for hookworm, 2,096 or 42.3 per cent, were found infected. Of 816 school children examined in 13 schools, 19, or 2.3 per cent. were suffering from trachoma.

Partially as a result of interstate railway and automobile communication, modern improvements in various fields of endeavor, in-

cluding rural nurses, hospitals, and dispensaries, are now being introduced and welcomed. The relatively impoverished condition of these people, however, retards self-help. Within recent years outstanding results have been obtained by outside individuals or organizations in ameliorating health and living conditions among these people, who are suspicious by nature, but are genuinely receptive to proven sincere intentions.

Up in the mountainous region of North Carolina, in the obscure hamlet of Altapass, is Holman Hospital, a monument to a young trained nurse, who 25 years ago, was called south from New York to a mountain town near by to care for a private patient from the north. Convinced of the need for such work in this region, she dedicated herself to the alleviation of the condition of the mountain people. Enduring privation and overcoming seemingly unsurmountable obstacles, without salary, her own means exhausted, she solicited funds from the North and, with no precedent to guide, for 25 years she rode her horse through sunshine and storm over the mountains to the homes of the suffering. Now she directs this modern hospital among those whose lives have been made happier and better through her lessons in hygiene, sanitation, and right living.

At White Rock, N. C., an up-to-date mission institution, Laurel Hospital, sponsored by the Board of National Missions of the Presbyterian Church, ministers to the sick of the mountain people and teaches them better modes of living.

At the Rocky Fork community center, near Flag Pond, Tenn., school, health, and social work among the mountain people are carried on. It was started in 1904, and is maintained by the Board of National Missions of the Presbyterian Church. One woman has been continuously in charge since 1904. A visiting nurse goes to distant mountain cabins. A dispensary and small hospital are the center of a notable public-health work.

At Hominy, near Chandler, N. C., is Pisgah Sanatorium, connected with a school for mountain youth, inspired by the Seventh-day Adventist Church. The sanatorium is a health center where health demonstrations to rural people are given and from which health lessons are carried to rural homes. Most of the pupils of the school work their way through, and have built all the buildings of the institution, which is practically self-supporting.

At Pine Mountains, Ky., is Pine Mountain settlement school, an independent institution supported by private contributions "to give industrial, moral, and intellectual education" to mountain children. It has a medical settlement with a doctor in charge, where treatments are given and clinics held and from which the doctor and nurse go among the mountain people to give treatments and do bedside nursing. As an inducement to start this school an old mountaineer gave 136 acres of land for school purposes, expressing the hope that the school would make a bright and intelligent people after he was gone.

Other similar institutions have established hospitals and medical settlements in these mountains, accomplishing wonderful results, but the needs are great and the resources are small.

GRACE HOSPITAL, BANNERS ELK, N. C.

Four thousand feet above the sea level, surrounded by mountains 5,000 to 6,000 feet high and 9 miles from a railway, Grace Hospital ministers to the health of the mountain people. Its aim is to attract to them the rural doctor.

In 1897 a young minister of the Presbyterian Church (South) came into this region and established a small chapel, the only other building in the place being a combination post office and store. In 1899, as the great need had become apparent, a girls' institution, Lees-McRae Institute, was established "in the mountains, of the mountains, and for the mountains."

The institution continued to grow, supported by local self-help and outside contributions. In 1923 it owned 350 acres of land, 150 acres under cultivation or in pasture. Grandfather's Home had been established, housing 56 orphans, 8 of them babies in a separate cottage in charge of a matron. The land cultivated by the orphan boys furnished the tables of the whole institution with meat, fruit, and vegetables. The first little chapel has grown to a large church. There is an administrative building and a dormitory for 80 girls, both recently constructed, and another building is planned. In addition to its own water system, the institution has its own concrete dam and steel flume which develop its needed power, and it sells the surplus to local homes and industries for heat, light, and power. Thirteen hundred mountain girls have been trained at the school, and 35 of the graduates, after taking special training at other schools, are doing trained nursing at various places.

Meanwhile the need for a hospital became increasingly apparent to care for the sick and injured in this region, where modern methods were almost unknown, and to show these isolated people the measures that save life, relieve pain, and promote health. The nearest hospital was 50 miles away, including a 9-mile wagon-road trip. Then, too, a hospital was considered an important means of bringing back the country doctor. Fourteen years before there had been nine doctors in the county, while in 1922 there were only 5, none of whom lived near the school. In addition, there was a growing desire to establish the fact that hospitals could succeed in rural mountain communities, since hospitals had come to be considered the salvation of rural health work in regions remote from large centers.

In 1910 an old building was converted into a home for a doctor, an emergency hospital, and dispensary for the students and mountain people. Later a new cottage was provided for the doctor. In 1922 it was decided to build a modern hospital with funds made possible by the generous gift of a woman of the State, some minor gifts, and some money subscribed locally. On June 1, 1924, a modern well-equipped hospital was opened to these people of the hills which, located on a site of 5 acres of rising ground, commands a beautiful mountain view.

The building, of brick and reinforced concrete construction, has three stories and a basement. (Fig. 21.) About the only wood used in the building is in the doors. There are two wards and three private rooms. The building has elevator service and in the equip-

ment is a Roentgen-ray machine. It is provided with steam heat, electric light, and septic-tank sewage disposal, which meet requirements of the State board of health. After the hospital was constructed, another cottage was built for the second doctor.

The hospital cost $30,000; the equipment, $6,000; and the two doctors' cottages, $6,000. Day labor at $2 per day was used in construction. The doctor in charge managed the work. The railways gave one-half rates on carloads of material. The architect's work was done at cost, and the steel was installed by a man from the factory at a cost of $70 for the work. It was necessary to borrow $3,100 to complete the building.

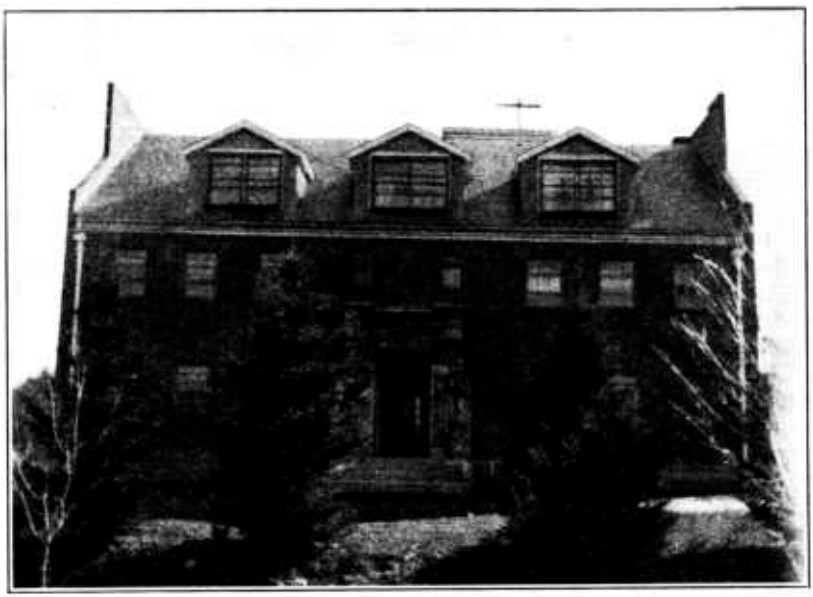

FIG. 21.—An institution for mountain people. Grace Hospital, Banners Elk, N. C.

In addition to receipts from fees, the hospital has $1,500 annually, the interest on an endowment of $25,000. Following is the annual financial statement for the first year of operation:

Summary of financial statement and work done June 1, 1925, to May 31, 1925

Total number of workers, all departments	12.
Number of dispensary patients	4,020.
Number of bed patients	222.
Total number of days of patients	3,792.
Number of nurses trained	3.
Total operating expenses	$6,670.05.
Total cost per day per patient	$1.75.
Patients making payment of any amount	54.4 per cent or 2,063 bed days.
Patients making no payment	45.6 per cent or 1729 bed days.
Total hospital should have received from patients (not including X-ray work)	$8,204.
Total hospital received from patients	$4,454.34.
Amount charity-bed patients' hospital fees	$3,749.66.
Number of operations	130.
Operating room fee charged by hospital	$5.

Total receipts for buildings, equipment and operating expenses(including operating receipts, donations, etc.)	$11,721.44.
Total disbursements for buildings, equipment and operating expenses	$11,006.64.
Cash balance	$714.80.
Estimate of equipment and supplies received direct (no cash transactions)	$1,500.
Total estimated value of buildings and equipment	$50,000.
Total indebtedness for hospital building, second physician's home, operating expenses and equipment (all sources)	$5,762.92.
Solvent accounts receivable	$400.
Solvent accounts receivable and cash balance	$1,114.80.
Patients drawn from nine counties; estimated number of people influenced	10,000.

Cost of operating hospital June 1, 1924, to May 31, 1925

Total received for operating expenses:		
Hospital fees		$4,454.34
X-ray fees		213.00
Donations		313.97
R. K. Smith fund		1,500.00
Miscellaneous		294.13
Total		6,775.44
Total disbursed for operating expenses:		
Salaries	$1,730.45	
Labor	378.94	
Laundry	509.15	
Office supplies	103.13	
Kitchen supplies	2,314.40	
Hospital supplies	457.22	
X-ray supplies	107.39	
Fuel and ice	399.96	
Interest and insurance	253.08	
Miscellaneous	416.33	
Total		6,670.05
Cash received for operating expenses		105.39

The salary list shows that the superintendent of the hospital, a registered nurse, receives $50 per month; orderly, bookkeeper, and housekeeper, each $25 per month; cook, $20 per month. The four pupil nurses receive for the first two years $10 per month and the last year $12 per month. Board, room, and laundry are furnished to this staff. The laundress receives $1.25 per day. The two doctors receive hospital fees from pay patients only, but are allowed to practice their profession outside. Cottages are furnished them rent free. The doctors instruct the pupil nurses. More than 50 per cent of the hospital service is for charity.

General rates are $2 per day for wards and $3 per day for private rooms. Maternity rates are $2 per day plus the $15 doctor's fee. Hospital debts take precedence over debts to the doctors. No worthy patients are refused entrance, and they may be brought by any doctor. The hospital is not run for profit. If there is a balance, the money is used for expansion.

Much of the work done by the hospital is in the nature of prevention. Within a 6-mile radius vaccination is practically complete. Pupils and mountain people are vaccinated for smallpox, typhoid,

and whooping cough; babies for diphtheria. Tonsil, adenoid, and orthopedic clinics are held for all the people. A striking example of what may be accomplished in a rural hospital by proper methods is the increasing number of maternity patients handled. After the small emergency hospital was established in 1910, it was exceedingly difficult to induce women to come to the hospital for confinement. Now few women refuse to come. It has taken about three years to convince these people, who are naturally more suspicious of hospitals than most rural people, of the advantages of the hospital. The chief recompense of the members of the staff is the increasing use of the hospital by the people and their growing receptiveness to preventive measures.

The complete institution at Banners Elk, including Grace Hospital, which so successfully serves this mountain community, is under the control of the Presbyterian Church in the United States (South). On account of the very large amount of charity work necessarily done by this and similar hospitals ministering to the mountain people, their financial success depends greatly upon the aid of philanthropic people from the outside. The considerable amount of time and energy consumed in securing this financial aid subtracts from time and energy which should be given to the hospital itself.

CONCLUSION

The movement for the establishment of rural hospitals is on. Many methods are available. There are no legal impediments. New State laws are being enacted opening new ways. Any community may have a hospital if it really wants it. Farmers are realizing the value of hospitals and are recognizing the handicap which the absence of hospitals and doctors places upon farming communities. Health and medical officers are increasingly taking notice of the health problem presented by the 50,000,000 people living in rural territory. Far-seeing leaders of the medical profession not only deplore the lack of doctors and hospitals in rural communities but are actually attacking the problem. With the general establishment of rural hospitals, together with the resultant aid to the return of rural doctors, the health and social phases of equality of agriculture with other industries will be nearer accomplishment.

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